

Chapter 1. Purpose and Need for Action

1.1 BACKGROUND

The Strategic Petroleum Reserve (SPR) is a national stockpile of petroleum (crude oil). Following the 1973-74 oil embargo, the SPR was established pursuant to the Energy Policy and Conservation Act of 1975 to protect the United States from interruption in petroleum supplies that would be detrimental to our energy security, national security, and economy. The SPR currently consists of four underground oil storage facilities along the Gulf Coast—two in Louisiana (Bayou Choctaw and West Hackberry) and two in Texas (Big Hill and Bryan Mound)—and an administrative facility in New Orleans, LA. At the storage facilities, crude oil is stored in caverns constructed by the **solution mining of rock salt formations (salt domes)**. The four SPR facilities have a combined current storage capacity of 727 million barrels (MMB) and an inventory of 688 MMB as of May 4, 2006.

Glossary Terms: To help readers more fully understand this Environmental Impact Statement, we have used bold type for technical and scientific terms the first time each appears in the text. The Glossary provides a full definition of each of these terms. In some cases, the definition of the term also appears in a highlighted text box near the first occurrence of the term in the text.

If the United States is confronted with an economically-threatening disruption in oil supplies, the President can use the SPR as an emergency response tool, transferring oil from the SPR into the commercial oil distribution systems. The SPR has been used twice under these conditions. First, at the beginning of Operation Desert Storm in 1991, the United States joined its allies in assuring the adequacy of global oil supplies when war broke out in the Persian Gulf. An emergency sale of SPR crude oil was announced the day the war began. The second instance was in September 2005 after Hurricane Katrina devastated the oil production, distribution, and refining industries in the Gulf regions of Louisiana and Mississippi. In addition to national energy emergencies, crude oil has been withdrawn many times from the SPR sites for other reasons. Small quantities of oil are routinely pumped from the storage caverns to test the reserve's equipment. In addition, oil has been removed from the caverns under the legal authority to "exchange" SPR crude oil with private companies, where the SPR ultimately receives more oil than it released.

The U.S. Department of Energy (DOE) conducted planning activities for the expansion of the SPR to 1 billion barrels under prior congressional directives in 1988 and 1990. The expansion planning directive in 1988 resulted in an initial plan entitled *Report to Congress on Expansion of the Strategic Petroleum Reserve to One Billion Barrels* (DOE 1989b). The expansion planning directive in 1990 likewise resulted in *Report to Congress on Candidate Sites for Expansion of the Strategic Petroleum Reserve to One Billion Barrels* (DOE 1991b) and the preparation of *Draft Environmental Impact Statement, DOE/EIS-0165-D* in 1992, which assessed five candidate sites for the expansion of the SPR to 1 billion barrels: Big Hill, TX; Stratton Ridge, TX; Weeks Island, LA; Cote Blanche, LA; and Richton, MS (DOE 1992a). DOE/EIS-0165-D is available on the DOE Fossil Energy Web site at <http://www.fossil.energy.gov/programs/reserves/spr/expansion-eis.html>. Prior to completion of the final EIS, DOE notified Congress that due to the existence of a large unfilled capacity in the SPR, DOE would be deferring any site selection decisions and expansion of the SPR until such time that oil fill of the SPR supported the need for further capacity development.

1.2 PURPOSE AND NEED

On August 8, 2005, the President signed the Energy Policy Act of 2005 (EPACT). Section 303 of EPACT states that:

“Not later than 1 year after the date of enactment of this Act, the Secretary shall complete a proceeding to select, from sites that the Secretary has previously studied, sites necessary to enable acquisition by the Secretary of the full authorized volume of the Strategic Petroleum Reserve.”

Thus, the purpose and need for agency action is to select and develop the sites to expand SPR capacity from 727 million barrels to 1 billion barrels.

1.3 DOE DECISION

This environmental impact statement (EIS) will be used by DOE to make a decision on site selection for expansion of the SPR. As outlined more completely in Chapter 2 of this document, DOE is analyzing potential impacts from a new site at Bruinsburg, MS; Chacahoula, LA; Clovelly, LA; Richton, MS; and Stratton Ridge, TX; and two combinations of both Clovelly, LA, and Bruinsburg, MS. In addition, DOE is studying impacts from expanding capacity at Bayou Choctaw, LA, Big Hill, TX, and West Hackberry, LA.

1.4 NATIONAL ENVIRONMENTAL POLICY ACT PROCESS

DOE has determined that the expansion of the SPR required by EPACT constitutes a major Federal action that is subject to the National Environmental Policy Act (NEPA). This EIS document has been prepared in accordance with NEPA, the Council on Environmental Quality (CEQ) NEPA regulations (40 CFR Parts 1500–1508), DOE NEPA regulations (10 CFR Part 1021) and **wetland** and **floodplain** regulations (10 CFR 1022). This EIS assesses the potential environmental impacts of the development of new SPR sites and the expansion of existing SPR sites and their associated infrastructures.

1.4.1 Scoping and Public Involvement

On September 1, 2005, DOE published a Notice of Intent to Prepare an EIS (70 FR 52088). The Notice of Intent invited interested agencies, organizations, Native American tribes, and members of the public to submit comments or suggestions to assist DOE in identifying significant environmental issues and determining the appropriate scope of the EIS. The notice also identified the dates and locations of public scoping meetings and stated that the public scoping period would run from September 1 to October 14, 2005.

As a result of the effects of Hurricanes Katrina and Rita on the Gulf Coast region, DOE issued a Notice to Extend the Public Scoping Period and Reschedule Public Scoping Meetings, extending the scoping period by 2 weeks, until October 28, 2005 (70 FR 56649, September 28, 2005). In the notice, DOE also announced the cancellation of the public scoping meetings in Hattiesburg and Pascagoula, MS, and provided new dates and locations for the other public scoping meetings. On October 27, 2005, Governor Haley Barbour of Mississippi requested the Secretary of Energy to include a new site in the EIS. In response, DOE extended the public scoping period until December 19, 2005 (70 FR 70600, November 22, 2005) and scheduled another scoping meeting.

1.4.2 Summary of Public Scoping Process

DOE held four public scoping meetings, as shown in table 1.3.2-1.

Table 1.3.2-1: Scoping Meetings

Location	Date	Proposed Sites Close to Meeting Location	Attendance	Speakers
Lake Jackson, TX	October 11, 2005	Stratton Ridge, TX	16	0
Jackson, MS	October 17, 2005	Richton, MS	24	4
Houma, LA	October 18, 2005	Chacahoula, LA, and Clovelly, LA	19	3
Port Gibson, MS	December 7, 2005	Bruinsburg, MS	21	7

The public scoping meetings were attended by approximately 80 people, some of whom provided oral and written comments. During the scoping period, DOE also met with Federal and state agencies with jurisdiction over the proposed new and existing SPR expansion sites in Louisiana, Mississippi, and Texas. At these meetings, DOE received comments from the agencies on environmental issues to be reviewed after review of scoping comments.

1.4.2.1 Summary of Scoping Comments

DOE received 67 scoping comments from 48 members of the public, companies, organizations, and government agencies. Comments focused mainly, but not exclusively, on the impacts of the construction and operation of the SPR facilities on water, land, and marine resources, and on various habitats of land and marine species. The following paragraphs summarize the major issues addressed in the comments. Unless otherwise noted, the discussions and analyses included in the draft EIS address the core topics of these comments. Copies of the comments received during the scoping period and complete public meeting transcripts are available from the Internet site <http://www.fossil.energy.gov/programs/reserves/spr/expansion-eis.html>.

Public Health and Safety, Accidental Releases: Commenters stated that DOE needs to address public health issues and the potential impacts on health and safety. One concern was the cumulative and secondary impacts the project presents for the increased risks of terrorism or accidents because of proposals to build liquid natural gas facilities near the proposed Stratton Ridge site. There is no longer a proposal to build such a facility near the Stratton Ridge site. The affected environment and analysis of potential environmental risks and public and occupational safety and health impacts are discussed in chapter 3, section 3.2.

Land Use: Commenters asked that DOE examine various potential impacts including loss of prime farmland, adverse effects on coastal areas, and land use changes at storage sites, pipelines rights-of-way, and other facilities. Commenters expressed concern that the proposed locations of the caverns for the Richton and Stratton Ridge sites would preclude other uses of the salt domes or affect mineral rights and expressed concern that the proposed Stratton Ridge site is located in the vicinity of security areas of existing and proposed industrial facilities. Affected land uses and site-specific analysis of potential land use impacts associated with the SPR sites are discussed in chapter 3, section 3.3. One commenter suggested that the EIS address impacts on the Gulf Islands National Seashore; however, the proposed action would not affect the Seashore.

Geology: Commenters expressed concerns about cavern creep and subsidence that might be caused by the creation of additional oil storage caverns at the already extensively developed Stratton Ridge salt dome, and suggested that the EIS evaluate this potential for adverse impacts. The affected environment and site-specific analysis of potential geology and soils impacts for each SPR site are discussed in chapter 3, section 3.4.

Air Quality: Noting that the Bayou Choctaw, Big Hill, and Stratton Ridge sites are in air quality nonattainment areas for the 8-hour ozone ambient standard and that they are subject to the Clean Air Act General Conformity rule and related state regulations, commenters asked that DOE estimate the potential emissions of volatile organic compounds and oxides of nitrogen during construction and operation at these sites and compare them to conformity threshold levels. Conformity analyses for the Bayou Choctaw, Big Hill, and Stratton Ridge sites are discussed in chapter 3, section 3.5. Other issues raised by commenters included cumulative air pollutant emissions and emissions from the oil blanket during solution mining. The affected environment and analysis of potential air quality impacts of construction and operation of the proposed action are discussed in chapter 3, section 3.5 and chapter 4.

Water Resources: Commenters requested that DOE evaluate the potential impacts of construction and operation of new oil storage caverns and underground injection wells on local aquifers, and the secondary and cumulative impacts of SPR expansion on wetlands and water quality, including water salinity. Commenters expressed concern about potential impacts to rivers and coastal areas. Commenters also requested analyses of potential impacts of water withdrawal from freshwater bodies for SPR expansion and operation, runoff from construction and operation of SPR facilities, and brine disposal in the Gulf of Mexico. Commenters suggested alternative sources of raw water intake for the Stratton Ridge and Richton sites. The affected environment and analysis of potential impacts to water resources from construction and operation of the Proposed Action are discussed in chapter 3, section 3.6 and chapter 4.

Biological Resources: Commenters asked that the EIS analyze the potential primary, secondary, and cumulative impacts of SPR expansion on a variety of habitats and species. Habitats of particular concern included wetlands and essential fish habitat (EFH). Fauna of concern included shrimp, oysters, and native fish species including those that are commercially important; migratory marine species including sharks and billfishes; water birds; migratory birds; and some threatened and endangered species such as the Bald Eagle, Diamondback Terrapin, Gulf Sturgeon, Red-bellied Turtle, Brown Pelican, and Louisiana Black Bear, and also candidate species. Commenters identified specific biological resource areas (e.g., forested wetlands, wildlife refuges, national seashores, national forests, and live bottoms crossed by offshore brine disposal pipelines) or specific flora or fauna species (e.g., specific locations of bald eagle nesting areas) in the project vicinity with respect to specific SPR sites, pipeline rights-of-way, raw water withdrawal areas, and brine disposal areas.

The affected environment and potential impacts to biological resources from construction and operation of the Proposed Action are discussed in chapter 3, section 3.7. The impact assessment methodology for plants, wetlands, and wildlife is described in section 3.7.1.1; for special status species (including threatened and endangered species, marine mammals, and managed fisheries) in section 3.7.1.2; for EFH in section 3.7.1.3; and for special status areas (including national wildlife refuges, wilderness areas, Coastal Wetlands Planning, Protection and Restoration Act areas, and coastal natural resource areas) in section 3.7.1.4. Potential impacts associated with specific areas of concern and specific species of concern identified by commenters are addressed in the site-specific impact analyses in section 3.7.

Socioeconomics: Commenters requested that DOE evaluate potential economic impacts on local communities, commercial and recreational fishing interests, tourism, and other economic interests in Louisiana, Mississippi, and Texas, particularly in areas affected by Hurricane Katrina. Similarly, commenters expressed concern about impacts to local industries by competition for workers and housing already in short supply. The affected environment and analysis of potential socioeconomic impacts of construction and operation of the proposed action are discussed in chapter 3, section 3.8.

Cultural Resources: Commenters addressed potential Native American concerns, particularly for the Richton and Bruinsburg sites. Commenters also identified themselves as having cultural affiliation with specific SPR sites, and requested that they be notified and that specific procedures be followed in the

event that cultural artifacts are discovered during SPR site development. They also suggested the need for archaeological and cultural surveys at the Stratton Ridge, Richton, and Big Hill sites should these sites be selected by DOE. The site-specific cultural resources affected environment and potential impacts to cultural resources for each SPR site are discussed in chapter 3, section 3.9. Specific procedures that would be implemented by DOE for the selected sites are also discussed in Section 3.9.

Environmental Justice: A commenter requested that DOE fully consider the environmental justice impacts of additional environmental risk and pollution associated with SPR expansion in low-income communities in light of the effects of Hurricane Katrina. Commenters also identified specific aspects (e.g., income level) of their communities. The affected environment and site-specific environmental justice impact analyses for each SPR site are presented in chapter 3, section 3.11.

Alternatives: Commenters proposed alternative locations for the storage of crude oil. The suggestions included sites in Louisiana, Texas, New Mexico, and Virginia. A discussion of the proposed action and alternatives, including a discussion of the statutory basis for selection of alternatives and alternatives considered but eliminated from detailed study, is included in chapter 2, section 2.7.

Irreversible and Irretrievable Commitment of Resources: A commenter expressed concern that development of SPR storage caverns would result in the irretrievable loss of salt resources that could otherwise be used for chlorine production. This issue is analyzed in chapter 3, section 3.3 and chapter 5.

Cumulative Impacts: Commenters requested that secondary and cumulative impacts of the Proposed Action and similar past, ongoing, or future actions, including cumulative impacts to water quality, biological resources, air quality, and socioeconomics, be addressed. Commenters identified specific actions (e.g., proposed liquefied natural gas facilities, future oil and gas production and pipelines) and requested that impacts of these actions be considered in the cumulative impacts analysis. Commenters also identified specific impacts (e.g., fish mortality caused by Hurricane Katrina) and requested that such impacts be considered in the cumulative impact analysis. Commenters suggested that the cumulative impacts analysis address specific activities (e.g., commercial fishing). Relevant actions and analysis of potential cumulative impacts of the proposed action are discussed in chapter 4.

Mitigation: Commenters requested that measures to avoid, minimize, and offset impacts (e.g., impacts to wetlands) of construction and operation of the Proposed Action be discussed in a mitigation section of the EIS. Commenters suggested specific mitigation measures be applied to specific SPR sites, pipeline rights-of-way, raw water intake areas, or brine disposal areas. The potential impacts and the associated mitigation measures are discussed in the same sections of the EIS (e.g., mitigation measures for impacts to wetlands are discussed in section 3.7 and appendix B).

1.4.3 Final Environmental Impact Statement and Record of Decision

DOE invites interested agencies, organizations, Native American tribes, and members of the public to submit comments on all aspects of this draft EIS. Locations and times of public hearings on the draft EIS will be announced in the Federal Register on May 26, 2006. Oral and written comments at those hearings are encouraged. Commenters are also encouraged to send written comments to Donald Silawsky, Office of Petroleum Reserves (FE-47), U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585-0301, or electronic mail at Donald.Silawsky@hq.doe.gov. Please note that conventional mail to DOE may be delayed by anthrax screening. The public comment period will be open for 45 days following publication of the draft EIS in the Federal Register. Any comments received later will be considered to the extent practicable.

DOE will consider all comments on the draft EIS in preparing the final EIS in accordance with NEPA, CEQ NEPA regulations, and DOE NEPA regulations. It will include the oral and written comments received on the draft EIS and responses from DOE.

No decision on the proposed action will be made by DOE until a minimum of 30 days after the Environmental Protection Agency's notice of availability of the final EIS. After this period, DOE will issue a Record of Decision concerning the proposed action. The Record of Decision will notify the public of the alternative that DOE has selected and the reasons for that decision. DOE will publish the Record of Decision in the Federal Register and post it on the DOE Fossil Energy Web site at <http://www.fossil.energy.gov/programs/reserves/spr/expansion-eis.html>.